

Notice of Allowability

Application No.

09/912,364

Examiner

Yubin Hung

Applicant(s)

SAKUYAMA, HIROYUKI

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed September 22, 2005.
2. ☒ The allowed claim(s) is/are 3-9, 13-17, 19-25, 29-33, 35, 36, 39-45 & 49-53 (renumbered as 1-38).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 22, 2005 has been entered.

2. In view of the applicant's amendment, the 35 USC § 112 rejection has been withdrawn.

3. Applicant's argument, see page 17, 2nd and 3rd paragraphs of the amendment filed 09/22/2005, with respect to claims 16, 32 and 52 has been fully considered and are persuasive. The rejections of claims 16, 32 and 52 and their respective dependent claims have been withdrawn.

Allowable Subject Matter

4. Claims 3-9, 13-17, 19-25, 29-33, 35, 36, 39-45 & 49-53 are allowed.

5. The following is an examiner's statement of reasons for allowance:

6. Regarding claim 19, and similarly claims 3, and 39, the prior art of record fails to teach or suggest, alone or in combination, a method for processing a component color image signal comprising, along with other limitations:

- computing said color difference per unit error by averaging color differences over all values of G as a parameter among components R, G and B

7. Regarding claim 20, and similarly claims 4, 9, 25, 40 and 45, the prior art of record fails to teach or suggest, alone or in combination, a method for processing a component color image signal comprising, along with other limitations:

- obtaining said color difference per unit error as an envelope drawn through maximal points of color difference versus component color image signal plots for all values of G as a parameter among components R, G and B

8. Regarding claim 21, and similarly claims 5, 35 and 41, the prior art of record fails to teach or suggest, alone or in combination, a method for processing a component color image signals comprising, along with other limitations:

- quantizing said component color image signal under a quantization level number different for each of a plurality of quantization regions specified by a value of said component color image signal corresponding to a maximum of a color difference per unit error caused by quantization of said component color image signal

Closest art of record Yamagami et al. (US 5,072,290) discloses using allowable quantization error (such as measured by L*a*b color difference, for example) to guide subsequent quantization. [See Col. 1, lines 54-64.] However, Yamagami does not teach using the maximum of the quantization error to partition the color component signal values into regions so that each region can be assigned a different quantization level number.

9. Regarding claim 29, and similarly claims 13, 36 and 49, the prior art of record fails to teach or suggest, alone or in combination, a method for processing a plurality of component color image signals comprising, along with other limitations:

- quantizing one of said plurality of color signals depending on other color signals which are not presently quantized

10. Regarding claim 30, and similarly claims 14 and 50, the prior art of record fails to teach or suggest, alone or in combination, a method for processing a plurality of component color image signals comprising, along with other limitations:

- quantizing one of said plurality of component color image signals depending on a position thereof on a plane identified by a subsection of said plane; said plane being specified by said plurality of component color image signals, as parameters, and divided into a plurality of said subsections with respect to a locus of maximal points of a color difference per unit error caused by a quantization error of said component color image signal to be presently quantized

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yubin Hung whose telephone number is (571) 272-7451. The examiner can normally be reached on 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yubin Hung
Patent Examiner
November 23, 2005


KANJIBHAI PATEL
PRIMARY EXAMINER